

6 a cover having a top and first and second sides, said sides extending down-
7 wardly from the outer edges of said top and including projections that extend beneath the
8 bottom edges of said microplate, said top bowing upwardly from a central portion thereof to
9 said sides, whereby said top provides a resilient force that bears downwardly on said pressure
10 plate and upwardly on the bottom edges of said microplate.

10 16. (Amended) The assembly of claim 15 including longitudinal tabs, extending from said
1 first and second sides, whereby said cover may be disengaged from, or engaged with said
2 microplate by displacing said longitudinal tabs laterally outwardly or inwardly to move said
3 projections away from or beneath said bottom edges of said microplate.

10 17. (Amended) The assembly of claim 15 including:
2 a plurality of vertical tabs, generally perpendicular to said top, extending downward from
3 said projections; and
4 a plurality of recesses in said assembly that register with said vertical tabs,
5 whereby a plurality of cover assemblies can be stacked, with the vertical tabs on a cover ex-
6 tending into the recesses of a cover assembly that is disposed beneath.

REMARKS

In amending the claims, we have not adopted the exact wording suggested by the Examiner. However, we believe that the claims are accurate as they now stand. For example, instead of the term "flange" suggested in the Office Action, we have used the term "projection". We have retained the adjective "vertical" for the tabs in claim 1 to distinguish it from the term "horizontal" applied to the tabs recited in claim 2. However, we have included definitions of "vertical" and "horizontal".

In regard to claims 11 and 13 "planar ridge" has been replaced by "central," with the recitation that this portion contacts this pressure plate.

We request reconsideration of claims 13 and 15 as unpatentable over Sakabe in view of Warner et al. These claims cover a microplate assembly in which the cover itself provides a resilient spring force that ensures sealing of the microplate wells. Specifically the claims recite a lid whose top extends upwardly from a center line to downwardly extending side walls. The sidewalls include inwardly extending projections. To install the cover, the sidewalls are forced downwardly against the spring force resulting from bending of the top so that they engage the bottom surface of the microplate. As a result there is an upward force along the edges of the microplate and a downward force, exerted on the pressure plate and gasket by the top of the lid. The assembly is thus a compact self-sealing unit that lends itself to robotic manipulation.

Sakabe and Warner et al. describe arrangements for sealing the individual microplate wells. However they do not describe the arrangements by which the compressive forces are applied to the gaskets. Moreover, it is quite clear that their lids do not include any provisions for applying these forces, but rather that the forces are externally applied. Accordingly no combination of these references can disclose or suggest the arrangement defined by claims 13 and 15.

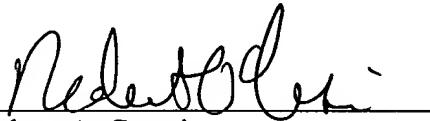
For the same reasons we also request reconsideration of the rejection of claims 14 and 16 under U.S.C. 103(a). These claims recite the provision of a cover whose top is bowed upward from the centerline and thus provides the resilient force that seals the assembly.

We note that the Information Disclosure Statement mailed to the United States Patent and Trademark Office on July 22, 2002 has apparently not been reviewed by the Examiner.

If Statement has been misplaced, we request that the Examiner contact the undersigned for transmittal of a copy.

Please charge any additional fee occasioned by this paper to our Deposit Account No. 03-1237.

Respectfully submitted,



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U.S. PATENT APPLICATION SER. NO. 09/740,624

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1 1. (Twice Amended) A cover assembly for a microplate, said assembly comprising:
2 a layer of material shaped and dimensioned to removably seal a plurality
3 of ~~a microplate's~~ well openings of said microplate;
4 a pressure plate disposed on said layer of material for dispersing a com-
5 pressive force in a generally uniform manner across said layer of material;
6 a cover having a top and first and second sides, said top shaped so as to
7 generate said compressive force when said cover is engaged with said microplate,
8 said first and second sides each including ~~a ledge~~ an inward projection for sup-
9 porting a bottom edge of said microplate ;
10 a plurality of vertical tabs extending downward from said ~~ledges~~ projec-
11 tions; and
12 a plurality of ~~apertures-recesses~~ in said cover assembly that register with said
13 tabs, whereby a plurality of the ~~eovers- cover assemblies~~ can be stacked with the
14 vertical tabs ~~on~~ of a each cover assembly extending down into the ~~apertures-re-~~
15 cesses of a cover assembly that is disposed beneath:

1 2. (Twice Amended) The cover assembly as in claim 1 wherein said top and said pres-
2 sure plate each include one or more horizontal tabs extending generally parallel to said
3 top and said sides ~~longitudinally extending tabs which enable~~ said horizontal tabs ena-
4 bling said cover to be engaged with or disengaged from said microplate by a robotic sys-
5 tem.

1 3. (Amended) The cover assembly as in claim 1 wherein said ~~eover's~~ first and second
2 sides of said cover include apertures which render at least portions of the side surfaces of
3 said microplate visible when said cover is engaged with said microplate.

1 6 The cover assembly of claim 1 wherein said pressure plate comprises a generally
2 rectangular piece of metal with robotic access features.

1 11. (Amended) The cover assembly of claim 1 wherein said cover top includes a
2 central, longitudinally extending ~~planar ridge~~ portion contacting said pressure plate and
3 lateral ~~and planar~~ portions extending upwardly from said ~~ridge~~ central portion at their
4 inner edges, said sides extending downwardly from the outer edges of said ~~planar~~ lateral
5 portions, whereby the ~~said planar~~ lateral portions and ~~said ridge~~ the central portion pro-
6 vide a resilient force that bears downward on said pressure plate and upward on the bot-
7 tom edges of said microplate.

1 12. (Amended) The assembly of claim 1 including longitudinal tabs, extending ~~tabs~~ from
2 said first and second sides, whereby said cover may be disengaged from or engaged with
3 said microplate by displacing said longitudinal tabs laterally outwardly or inwardly to
4 move said ~~ledges~~ projections away from or beneath said bottom edges of said micro-
5 plate.

1 14. (Amended) A cover assembly for a microplate, said assembly comprising:
2 a layer of material shaped and dimensioned to removably seal a plurality
3 of a microplate's well openings;
4 a pressure plate disposed on said layer of material for dispersing a com-
5 pressive force in a generally uniform manner across said layer of material; and
6 a cover having a top and first and second sides, said top including a cen-
7 tral, longitudinally extending ~~planar ridge~~ portion in contact with said pressure
8 plate and lateral ~~planar~~ portions extending upwardly from ~~said ridge~~ central por-
9 tion at their inner edges, said sides extending downwardly from the outer edges
10 of said planar portions and including ~~ledges~~ projections that extend beneath bot-
11 tom edges of said microplate;

12 whereby ~~the said planar~~ lateral portions and said ~~ridge~~ central portion
13 provide a resilient force that bears downward on said pressure plate and upward
14 on the bottom edges of said microplate.

1 14. (Amended) The assembly of claim 13 including longitudinal tabs, extending tabs
2 from said first and second sides, whereby said cover may be disengaged from or engaged
3 with said microplate by displacing said longitudinal tabs laterally outwardly or inwardly
4 to move said ~~ledges~~ projections away from or beneath said bottom edges of said micro-
5 plate.

1 15. (Amended) A cover assembly for a microplate, said assembly comprising:
2 a layer of compressible material shaped and dimensioned to removably seal a
3 plurality of a microplate's well openings;
4 a pressure plate disposed on said layer of material for dispersing a compres-
5 sive force in a generally uniform manner across said layer; and
6 a cover having a top and first and second sides, said sides extending down-
7 wardly from the outer edges of said top and including ~~ledges~~ projections that extend beneath
8 the bottom edges of said microplate, said top bowing upwardly from a central portion thereof
9 to said sides, whereby said top provides a resilient force that bears downwardly on said pres-
10 sure plate and upwardly on the bottom edges of said microplate

1 16. (Amended) The assembly of claim 15 including longitudinal tabs, extending from said
2 first and second sides, whereby said cover may be disengaged from, or engaged with said
3 microplate by displacing said longitudinal tabs laterally outwardly or inwardly to move said
4 ~~ledges~~ projections away from or beneath said bottom edges of said microplate.

1 17. (Amended) The assembly of claim 15 including:
2 a plurality of vertical tabs, generally perpendicular to said top, extending downward from
3 said ~~ledges~~ projections; and

4 a plurality of ~~apertures~~ recesses in said ~~cover~~ assembly that register with said
5 vertical tabs, whereby a plurality of the cover assemblies can be stacked, with the vertical
6 tabs on a cover extending into the ~~apertures~~ recesses of a cover assembly that is disposed
7 beneath.